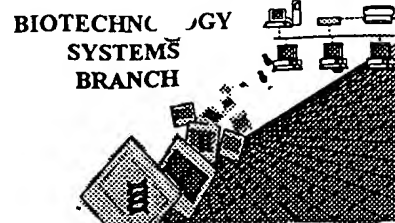


RAW SEQUENCE LISTING ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/909,566 B
Source: 01PE
Date Processed by STIC: 5-22-02

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/efb/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

Does Not Comply
Corrected Diskette Needed
see page 6



OIPE

RAW SEQUENCE LISTING

DATE: 05/22/2002

PATENT APPLICATION: US/09/909,566B

TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq 1st.txt

Output Set: N:\CRF3\05222002\I909566B.raw

3 <110> APPLICANT: Cahoon, Edgar B
 5 <120> TITLE OF INVENTION: A Cytochrome P450 enzyme associated with the synthesis of
 delta-
 6 12-epoxy fatty acids
 8 <130> FILE REFERENCE: BB1465 US NA
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/909,566B
 C--> 11 <141> CURRENT FILING DATE: 2002-05-10
 13 <150> PRIOR APPLICATION NUMBER: 60/219833
 14 <151> PRIOR FILING DATE: 2000-07-21
 16 <160> NUMBER OF SEQ ID NOS: 7
 18 <170> SOFTWARE: Microsoft Office 97
 20 <210> SEQ ID NO: 1
 21 <211> LENGTH: 1733
 22 <212> TYPE: DNA
 23 <213> ORGANISM: Euphorbia lagascae
 25 <400> SEQUENCE: 1
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 27 gcttggtttta atcttagtag tagtcatgag gttgtggaag aaacagaatc cacctccagg 120
 28 gccatggaag ttctctatca taggtaatct tctctattta ttactcactt ctgatctagg 180
 29 ccatagaacgt ttttagagcct tggctcaaat ttatggacct gttatgagtc ttcaaattgg 240
 30 ccaagtttca gctgttggtca tttcttcagc tgaagcagcc aaagagggtta tgaaaactca 300
 31 ggctgatgcc ttgcaccaac gccctatcgt cttggacgca cagatttgtgt ttataaatcg 360
 32 gaaagatgtc ttgtttgctt catatggaga tcaactggagg cagatgaaga aaatttggat 420
 33 acttgaattt ctgagtgcc aaaaagttca atcctccagg ttaatccgag aggaagaaat 480
 34 ggaggatgcc atcacattcc tccgttcgaa agccggatct ccggtcaata ttacaaagat 540
 35 catttatggc attataattt cgatcatgat aagaacatcc gttggttaatt gtaagcaaaa 600
 36 agaaagattg ctgagtgttg ccgatgcagt caatgaggca gcgacgagtt ttggcaccgc 660
 37 agacgctttt ccgacgtgga aattacttca ctatatcatt ggagctgagt caaaaccag 720
 38 gcgtttgcat caggagattg acgatatact tgaagagatt cttaatgaac acaaagccaa 780
 39 taagcctttt gaagcggata acttaatgga tgttctattg aatcttcaaa aaaatggaaa 840
 40 cgttccagtg ccagtgaaca acgaaagcat caaagcatcc gttttgcaaa tgtttactgc 900
 41 cgggagcgaa acaacttcga aagctacaga atgggtaatg gcagagctga tgaaaaatcc 960
 42 aactgaacta agaaaagcac aagaagaagt tagacaagta tttggtgaaa tgggaaaagt 1020
 43 tgatgaatca agatttcatg atttgaaatt cttcaagtta gtggttaaaag aaactctaag 1080
 44 attacatcct ccggttgtct tgattccgag ggagtgtaga gaaacaacac gaattgatgg 1140
 45 atatgaaatt catccgaaca ctccaattgt tgtgaatgct tgggcgatag gaagagatcc 1200
 46 taatacttgg tcggaacctg gaaagtttaa cccagaaagg tttaaagatt gtgcaattga 1260
 47 ttataaaggg acgacatttg aactggtacc atttggtgca ggaaaaagaa tatgtcctgg 1320
 48 cattaacttca gctattacca atttgagata tgtcattata aatctattat atcattttta 1380
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 52 atgttctaata atggtttggg tgagttataa taggttttcc accgatcata taagtagcct 1620
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RAW SEQUENCE LISTING

DATE: 05/22/2002

PATENT APPLICATION: US/09/909,566B

TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq 1st.txt

Output Set: N:\CRF3\05222002\I909566B.raw

54 gatttggatg gataataata aattgaaatg ttttctttttt caaatccgaa aaa 1733

57 <210> SEQ ID NO: 2

58 <211> LENGTH: 500

59 <212> TYPE: PRT

60 <213> ORGANISM: Euphorbia lagascae

62 <400> SEQUENCE: 2

63 Met Glu Gln Lys Asn Leu Ser Phe Pro Ser Ile Leu Ile Ser Phe Leu

64 1 5 10 15

66 Leu Val Leu Ile Leu Val Val Val Met Arg Leu Trp Lys Lys Gln Asn

67 20 25 30

69 Pro Pro Pro Gly Pro Trp Lys Phe Pro Ile Ile Gly Asn Leu Pro His

70 35 40 45

72 Leu Leu Leu Thr Ser Asp Leu Gly His Glu Arg Phe Arg Ala Leu Ala

73 50 55 60

75 Gln Ile Tyr Gly Pro Val Met Ser Leu Gln Ile Gly Gln Val Ser Ala

76 65 70 75 80

78 Val Val Ile Ser Ser Ala Glu Ala Ala Lys Glu Val Met Lys Thr Gln

79 85 90 95

81 Ala Asp Ala Phe Ala Gln Arg Pro Ile Val Leu Asp Ala Gln Ile Val

82 100 105 110

84 Phe Tyr Asn Arg Lys Asp Val Leu Phe Ala Ser Tyr Gly Asp His Trp

85 115 120 125

87 Arg Gln Met Lys Lys Ile Trp Ile Leu Glu Phe Leu Ser Ala Lys Lys

88 130 135 140

90 Val Gln Ser Ser Arg Leu Ile Arg Glu Glu Glu Met Glu Asp Ala Ile

91 145 150 155 160

93 Thr Phe Leu Arg Ser Lys Ala Gly Ser Pro Val Asn Ile Thr Lys Ile

94 165 170 175

96 Ile Tyr Gly Ile Ile Ile Ser Ile Met Ile Arg Thr Ser Val Gly Asn

97 180 185 190

99 Cys Lys Gln Lys Glu Arg Leu Leu Ser Val Ala Asp Ala Val Asn Glu

100 195 200 205

102 Ala Ala Thr Ser Phe Gly Thr Ala Asp Ala Phe Pro Thr Trp Lys Leu

103 210 215 220

105 Leu His Tyr Ile Ile Gly Ala Glu Ser Lys Pro Arg Arg Leu His Gln

106 225 230 235 240

108 Glu Ile Asp Asp Ile Leu Glu Glu Ile Leu Asn Glu His Lys Ala Asn

109 245 250 255

111 Lys Pro Phe Glu Ala Asp Asn Leu Met Asp Val Leu Leu Asn Leu Gln

112 260 265 270

114 Lys Asn Gly Asn Val Pro Val Pro Val Thr Asn Glu Ser Ile Lys Ala

115 275 280 285

117 Ser Val Leu Gln Met Phe Thr Ala Gly Ser Glu Thr Thr Ser Lys Ala

118 290 295 300

120 Thr Glu Trp Val Met Ala Glu Leu Met Lys Asn Pro Thr Glu Leu Arg

121 305 310 315 320

123 Lys Ala Gln Glu Glu Val Arg Gln Val Phe Gly Glu Met Gly Lys Val

124 325 330 335

126 Asp Glu Ser Arg Phe His Asp Leu Lys Phe Phe Lys Leu Val Val Lys

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002

TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq 1st.txt

Output Set: N:\CRF3\05222002\I909566B.raw

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127          340          345          350
129 Glu Thr Leu Arg Leu His Pro Pro Val Val Leu Ile Pro Arg Glu Cys
130          355          360          365
132 Arg Glu Thr Thr Arg Ile Asp Gly Tyr Glu Ile His Pro Asn Thr Arg
133          370          375          380
135 Ile Val Val Asn Ala Trp Ala Ile Gly Arg Asp Pro Asn Thr Trp Ser
136 385          390          395          400
138 Glu Pro Gly Lys Phe Asn Pro Glu Arg Phe Lys Asp Cys Ala Ile Asp
139          405          410          415
141 Tyr Lys Gly Thr Thr Phe Glu Leu Val Pro Phe Gly Ala Gly Lys Arg
142          420          425          430
144 Ile Cys Pro Gly Ile Thr Ser Ala Ile Thr Asn Leu Glu Tyr Val Ile
145          435          440          445
147 Ile Asn Leu Leu Tyr His Phe Asn Trp Glu Leu Ala Asp Gly Ile Thr
148          450          455          460
150 Pro Gln Thr Leu Asp Met Thr Glu Ala Ile Gly Gly Ala Leu Arg Lys
151 465          470          475          480
153 Lys Ile Asp Leu Lys Leu Ile Pro Ile Pro Tyr Gln Val Ser Leu Gly
154          485          490          495
156 Ser Asn Ile Ser
157          500
160 <210> SEQ ID NO: 3
161 <211> LENGTH: 502
162 <212> TYPE: PRT
163 <213> ORGANISM: Capsicum annuum
165 <400> SEQUENCE: 3
166 Met Glu Ile Gln Phe Thr Asn Leu Val Ala Phe Leu Leu Phe Leu Ser
167 1          5          10          15
169 Ser Ile Ile Leu Leu Leu Lys Lys Trp Lys Thr Gln Lys Leu Asn Leu
170          20          25          30
172 Pro Pro Gly Pro Trp Lys Leu Pro Phe Ile Gly Ser Leu His His Leu
173          35          40          45
175 Ala Val Ala Gly Pro Leu Pro His His Gly Leu Lys Asn Leu Ala Lys
176          50          55          60
178 Leu Tyr Gly Pro Leu Met His Leu Arg Leu Gly Glu Ile Pro Thr Val
179 65          70          75          80
181 Ile Ile Ser Ser Pro Arg Met Ala Lys Glu Val Leu Lys Thr His Asp
182          85          90          95
184 Leu Ala Phe Ala Thr Arg Pro Lys Leu Val Val Ala Asp Ile Val His
185          100          105          110
187 Tyr Asp Ser Thr Asp Ile Ala Phe Ser Pro Tyr Gly Glu Tyr Trp Arg
188          115          120          125
190 Gln Ile Arg Lys Ile Cys Ile Leu Glu Leu Leu Ser Ala Lys Met Val
191          130          135          140
193 Lys Phe Phe Ser Ser Ile Arg Gln Asp Glu Leu Ser Met Met Val Ser
194 145          150          155          160
196 Ser Ile Arg Thr Met Pro Asn Phe Pro Val Asn Leu Thr Asp Lys Ile
197          165          170          175
199 Phe Trp Phe Thr Ser Ser Val Thr Cys Arg Ser Ala Leu Gly Lys Ile

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002

TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq 1st.txt
 Output Set: N:\CRF3\05222002\I909566B.raw

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200          180          185          190
202 Cys Arg Asp Gln Asp Lys Leu Ile Ile Phe Met Arg Glu Ile Ile Ser
203          195          200          205
205 Leu Thr Gly Gly Phe Ser Ile Ala Asp Phe Phe Pro Thr Trp Lys Met
206          210          215          220
208 Leu His Asp Val Gly Gly Ser Lys Thr Arg Leu Leu Lys Ala His Arg
209 225          230          235          240
211 Lys Ile Asp Glu Ile Leu Glu His Val Val Asn Glu His Lys Gln Asn
212          245          250          255
214 Arg Ala Asp Gly Gln Lys Gly Asn Gly Glu Phe Gly Gly Glu Asp Leu
215          260          265          270
217 Ile Asp Val Leu Leu Arg Val Arg Glu Ser Gly Glu Val Gln Ile Ser
218          275          280          285
220 Ile Thr Asp Asp Asn Ile Lys Ser Ile Leu Val Asp Met Phe Ser Ala
221          290          295          300
223 Gly Ser Glu Thr Ser Ser Thr Thr Ile Ile Trp Ala Leu Ala Glu Met
224 305          310          315          320
226 Met Lys Lys Pro Ser Val Leu Ala Lys Ala Gln Ala Glu Val Arg Gln
227          325          330          335
229 Val Leu Lys Glu Lys Lys Gly Phe Gln Gln Ile Asp Leu Asp Glu Leu
230          340          345          350
232 Lys Tyr Leu Lys Leu Val Ile Lys Glu Thr Leu Arg Met His Pro Pro
233          355          360          365
235 Ile Pro Leu Leu Val Pro Arg Glu Cys Met Lys Asp Thr Lys Ile Asp
236          370          375          380
238 Gly Tyr Asn Ile Pro Phe Lys Thr Arg Val Ile Val Asn Ala Trp Ala
239 385          390          395          400
241 Ile Gly Arg Asp Pro Glu Ser Trp Asp Asp Pro Glu Ser Phe Ser Pro
242          405          410          415
244 Glu Arg Phe Glu Asn Ser Ser Val Asp Phe Leu Gly Ser His His Gln
245          420          425          430
247 Phe Ile Pro Phe Gly Ala Gly Arg Arg Ile Cys Pro Gly Met Leu Phe
248          435          440          445
250 Gly Leu Ala Asn Val Gly Gln Pro Leu Ala Gln Leu Leu Tyr His Phe
251          450          455          460
253 Asp Arg Lys Leu Pro Asn Gly Gln Ser His Glu Asn Leu Asp Met Thr
254 465          470          475          480
256 Glu Ser Pro Gly Ile Ser Ala Thr Arg Lys Asp Asp Leu Val Leu Ile
257          485          490          495
259 Ala Thr Pro Tyr Asp Pro
260          500
263 <210> SEQ ID NO: 4
264 <211> LENGTH: 51
265 <212> TYPE: DNA
266 <213> ORGANISM: artificial sequence
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W--> 268 <223> OTHER INFORMATION:
268 <400> SEQUENCE: 4
269 tcaaggagaa aaaaccccg atccatggag cagaaaaatc tctcttttcc g

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51

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002
TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq 1st.txt
Output Set: N:\CRF3\05222002\I909566B.raw

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272 <210> SEQ ID NO: 5
273 <211> LENGTH: 35
274 <212> TYPE: DNA
275 <213> ORGANISM: artificial sequence
W--> 277 <220> FEATURE:
W--> 277 <223> OTHER INFORMATION:
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      278 ggccagtgaa ttgtaatacg actcactata gggcg
      281 <210> SEQ ID NO: 6
      282 <211> LENGTH: 35
      283 <212> TYPE: DNA
      284 <213> ORGANISM: artificial sequence
W--> 286 <220> FEATURE:
W--> 286 <223> OTHER INFORMATION:
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      287 gcggccgcga attcggaaaa tggagcagaa aaatc
      290 <210> SEQ ID NO: 7
      291 <211> LENGTH: 35
      292 <212> TYPE: DNA
      293 <213> ORGANISM: artificial sequence
W--> 295 <220> FEATURE:
W--> 295 <223> OTHER INFORMATION:
      295 <400> SEQUENCE: 7                                35
      296 gcggccgcgg atccttagaa catcgtaat taaag
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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002
TIME: 11:28:30

Input Set : A:\bbl465 us nacorrected seq lst.txt
Output Set: N:\CRF3\05222002\I909566B.raw

Use of <220> Feature(NEW RULES):

Sequence(s) are missing the <220> Feature and associated headings.
Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence" or "Unknown". Please explain source of genetic material in <220> to <223> section (See "Federal Register," 6/01/98, Vol. 63, No. 104, pp.29631-32)
(Sec.1.823 of new Rules)

Seq#:4,5,6,7

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002

TIME: 11:28:30

Input Set : A:\bbl465 us nacorrected seq 1st.txt
Output Set: N:\CRF3\05222002\I909566B.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:268 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:268 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
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L:277 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:286 M:258 W: Mandatory Feature missing, <220> FEATURE:
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L:295 M:258 W: Mandatory Feature missing, <220> FEATURE:
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